AMENDMENTS TO THE CLAIMS

- 1.–25. (Cancelled)
- 26. (Currently amended) A method for aiding in the determination of whether a patient is susceptible to or at risk of <u>Alzheimer's disease (AD)</u>, a disease associated with β-amyloid formation and/or aggregation, said method comprising:
 - (a) determining, in a sample of brain extract or cerebrospinal fluid obtained from said patient, the amount of a N-terminal truncated and/or post-translationally modified β -amyloid 42 variant selected from the group consisting of A β (2-42), A β (3-42), A β (4-42), A β (5-42), A β (6-42), A β (8-42), and A β (9-42);
 - (b) comparing the amount of β-amyloid variant determined in step (a) with the amount of said variant typically present in control samples obtained from one or more patients known not to suffer from <u>AD</u> said-disease associated with β-amyloid formation and/or aggregation;
 - (c) determining, from the comparison in step (b) if the amount of β-amyloid variant determined in step (a) is greater than the amount of said variant typically present in control samples, that the patient is susceptible to or at risk of AD said disease associated with β amyloid formation and/or aggregation.

27.-34. (Cancelled)

- 35. (Previously presented) The method of claim 26 wherein the post-translationally modified β-amyloid variant is modified by methylation or pyroglutamylation.
- 36. (Previously presented) The method of claim 35 wherein the methylation is present at position 1, 2, 4, or 6 of an N-terminal truncated β-amyloid variant.
- 37. (Withdrawn) The method according to claim 35 further characterized in that the pyroglutamylation is present at position 3 of an N-terminal truncated β-amyloid variant starting at position 3 of β-amyloid.
- 38. (Cancelled)
- 39. (Cancelled)

- 40. (Previously presented) The method of claim 26 wherein the sample is a brain extract sample.
- 41. (Previously presented) The method of claim 26 wherein the sample is a cerebrospinal fluid (CSF) sample.
- 42. (Cancelled)
- 43. (Currently amended) The method of claim [[42]] $\underline{26}$ wherein the susceptibility to Alzheimer's disease (AD) or the risk of developing AD is determined by detecting A β (5-42) or A β (8-42).
- 44.-56. (Cancelled)
- 57. (Previously presented) The method of claim 26 wherein said β -amyloid variant is A β (4-42).
- 58. (Previously presented) The method of claim 26 wherein the post-translationally modified β-amyloid variant is modified by methylation.
- 59. (Previously presented) The method of claim 58 wherein the methylation is present at position 4 of an N-terminal truncated β-amyloid variant.
- 60. (Currently amended) The method of claim [[42]] $\underline{26}$ wherein the susceptibility to Alzheimer's disease (AD) or the risk of developing AD is determined by detecting A β (5-42).
- 61. (Previously presented) The method of claim 26 wherein the amount of N-terminal truncated and/or post-translationally modified β-amyloid variant is determined by 2-D electrophoresis or mass spectrometry or both.
- 62. (Cancelled)
- 63. (Previously presented) The method of claim 26 wherein the amount of the N-terminal truncated and/or post-translationally modified β -amyloid 42 ($A\beta_{42}$) variant is detected using an antibody that binds an epitope at the N-terminus of said variant.
- 64. (Cancelled)